

West Virginia — 2009

Forest Health Highlights



The Resource

The West Virginia landscape is dominated by more than 11.8 million acres of forest. Due in large part to its varied topography, the forest is a rich diversity of oaks, hickories, spruce, pines, and the West Virginia State Tree—sugar maple. Ninety percent of all forests in West Virginia are privately owned, but there are 9 State forests, 36 State parks, and 56 wildlife management areas that provide public enjoyment.

Forest Stewardship

The Forest Stewardship Program is administered by the West Virginia Division of Forestry. The intent of the program is to assist private nonindustrial forest landowners with improving their forests by managing them in a sound, scientific manner. In West Virginia, the Forest Stewardship Program includes having a forest management plan written by a professional forester, as well as financial assistance for recreation, forest improvement, soil and water protection, wetlands protection, fisheries habitat enhancement, wildlife habitat enhancement, tree planting, and improvement of forest roads. From 1990 through June 30, 2009, there have been 4,697 stewardship plans written in West Virginia; these plans have covered 763,991 acres of private forest lands.

Special Issues

Gypsy Moth — West Virginia Department of Agriculture (WVDA) field agents surveyed more than 326,018 acres of State and private land during the fall of 2008 to determine areas at risk for potential gypsy moth defoliation in the spring of 2009.

The WVDA completed treatments on 39,280 acres in the Gypsy Moth Cooperative State County Landowner (CSCL) Suppression Program. Another 6,930 acres were treated in late June in the Slow-the-Spread Action Area with pheromone flakes. WVDA Cooperative Forest Health Protection Specialists flew and sketchmapped 44,282 acres of

mostly light gypsy moth defoliation in five counties in West Virginia. This was down from last year's total of 81,308 acres. There was a collapse in the gypsy moth populations in the State's generally infested areas in 2009. It was difficult to find a viable gypsy moth egg mass in most of the generally infested area. As a result, there will not be a CSCL treatment program for 2010.

***Phytophthora ramorum* Provisional Laboratory Approval**

Program — Personnel from the WVDA, Plant Industries Division, PCR Laboratory participated again in the United States Department of Agriculture-Animal and Plant Health Inspection Service-Plant Protection Quarantine (USDA-APHIS-PPQ) *Phytophthora ramorum* Laboratory Provisional Approval Program. Lab personnel were administered the proficiency panel in April and were notified in April that they had passed the test panel. The lab and its personnel were provisionally approved to perform validated diagnostic tests for *Phytophthora ramorum* in 2009 on behalf of the USDA-APHIS-PPQ Programs.

***Phytophthora ramorum* Early Detection Survey for Forests-**

Stream Baiting — This is the fourth year of stream baiting for early detection of *Phytophthora ramorum* and detection of other *Phytophthora* species in a stream environment using bait leaves. The U.S. Forest Service launched a pilot survey in 2006.

Four streams were chosen in which two of the four streams were in the same watershed as a Trace Forward Nursery and the other two streams were in a watershed that contained a nursery that was considered an unofficial Trace Forward Nursery. This provided locations where baiting could be conducted downstream from these nurseries.

Six baiting periods were completed—three in the spring and the other three in the fall when water temperatures had dropped below 22 °C. Baiting was discontinued in one stream due to a report that MRSA (methicillin-resistant *Staphylococcus aureus*) was contracted from the water.

Culturing (WVDA) and Real-Time PCR (Mississippi State University) were used for detection of *P. ramorum*. Culturing was used for detection of general *Phytophthora* species and ELISA was used to corroborate culturing results. *P. ramorum* was not detected in any of the bait leaves sampled or cultured. *Phytophthora* species were recovered 100 percent of the time for all of the baiting periods.

Healthy/"Resistant" Beech — The WVDA, under an initiative of the U.S. Forest Service, is currently surveying for disease-free beech in areas of heavy scale and mortality. Once candidate trees have been deemed scale free, plant material will be sent to the U.S. Forest Service, which has been working on developing resistant varieties of American beech in hopes of determining how this resistance to the beech scale may be inherited.

The WVDA continued surveying for beech trees that still remain scale free and healthy in high-mortality areas resulting from the beech bark disease (BBD) complex and for beech trees that still remain scale free in heavily scale-infested/high-mortality areas. A handful of areas were chosen in the killing front. Data collected included diameter at breast height (DBH), scale presence/absence, tree condition (healthy/unhealthy), beech component of the area (percentage of beech stems), condition of beech in the area (scales only, scale and *Neonectria* cankers, BBD-induced decline), and distance to the nearest beech with heavy BBD levels.

The trees that seem to display resistance have characteristics such as smooth, gray bark; full crowns with no decline or very minimal decline; no yellowing of the leaves; and a DBH that is 10 cm or greater. Next year these same beech trees will be evaluated to determine if they have remained scale free in order for them to be considered candidate resistant trees.

Beech Scale Survey — A beech scale survey was conducted to monitor the spread of the scale. Beech scale now encompasses 3,712,335 acres in West Virginia. That number increased by 58,377 acres from the scale survey that was done in 2006.

Bacterial Leaf Scorch (BLS) — BLS was found in four new counties in 2009—Putnam, Mason, Summers, and Webster. BLS was detected in two new hosts as well: scarlet oak and boxelder maple. BLS is now found in 11 counties in West Virginia and on a total of eight hosts. Prior to 2008, BLS had been detected in only one county (Jefferson). Samples were processed by the WVDA Plant Pathology Lab.

Christmas Tree Disease and Insect Survey — A survey of Christmas tree diseases and insects was conducted on 14 Christmas tree farms across West Virginia. A total of 29 disease and insects or abiotic problems were noted. All detected disease and insect problems were restricted to a small percentage of the trees in any given plantation and caused relatively little economic loss. Certain problems could easily build to damaging levels over a wide area during a single or several growing seasons. Top disease and insect problems included *Diplo-*

dia tip blight, *Phytophthora cinnamomi*, white pine root decline, *Rhizosphaera* needle cast, and Eastern spruce gall adelgid.

Hemlock Woolly Adelgid (HWA) — With a new detection in Lincoln County, HWA can now be found in 35 West Virginia counties. In 2009, *Laricobius nigrinus* beetles (1,500 adults) were released in Little Beaver State Park (500 adults), Plum Orchard Lake Wildlife Management Area (500 adults), and Panther Wildlife Management Areas (500 adults). Previous release sites of *L. nigrinus* and *S. sinu-anodulus* were monitored for predator survival and impact on HWA.

The WVDA continued to treat high-value and high-visibility infested hemlocks with imidacloprid via soil injection and inserting Coretect tablets into the soil. A total of 1,022 trees representing 18,399.4 inches of tree diameter at breast height were treated at 13 sites.

Early Detection and Rapid Response (EDRR) — In 2009, WVDA personnel participated for the second time in the Early Detection and Rapid Response survey. This survey has the goal of detecting, delimiting, and monitoring newly introduced exotic bark and ambrosia beetles at selected high-risk forest areas.

A total of nine high-risk sites were selected in nine different counties. Trapping at these sites resulted in a total of 232 samples that were sent to screeners at Cornell University. Screeners found one species new to the State: *Xyleborus californicus*. They also found one target species: *Tomicus piniperda*.

Forest Fire

Fire occurrence during FY 2009 increased approximately 8 percent from the previous fiscal year, but was still within an “average” range. Dry overall conditions continued to persist, leading to expectations of increased fire activity. However, with a weather pattern that produced regular precipitation, the increased fire behavior we had prepared for was not fully experienced. In FY 2009, there were 1,006 wildland fires statewide that burned 12,750 acres. The “acres burned” figure was only up by 9 percent from FY 2008, which can be attributed to several fires located in terrain that was difficult to access. Fire damage to the State’s forests for FY 2009 was estimated to be about \$3,825,000. The three leading causes of West Virginia wildfires during FY 2009 continued to be escaped debris burning (33 percent), incendiary (arson) (28 percent), and equipment use (12 percent). With two consecutive years of below-average rainfall and even with a wet fall fire season, water tables and soil moisture levels are still concerns for the Division of Forestry for the coming spring 2010 fire season.

For More Information



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